

REMARKS

In response to the Examiner's comments in paragraph 3 of the Office Action, claims 12, 15, 24, 26, 35 and 37 have been amended as suggested.

Claims 12, 14 and 35 were rejected under 35 U.S.C. §102 on the grounds that they were considered to be anticipated by the Jung patent, and claims 13, 15, 26 and 37 were rejected under 35 U.S.C. §103 as being unpatentable over the Jung patent in view of the Moriyoshi patent. Claims 12 and 15 have been amended to clarify that the thresholds which are used to terminate the search are selected *before* step (iii) of the method is commenced, based on mismatch values from other blocks of the image, as previously recited in claim 13.

This claimed subject matter is different from Jung because Jung's method, as illustrated in Fig. 5 of the patent, terminates the search based on a comparison of a mismatch between a block presently under consideration and one of two thresholds: T_0 (in step S16) or MSE(ref) (step S34).

There is no discussion of how T_0 is derived, except for the rather vague reference at column 7, lines 20-25 to it being "adjusted in accordance with the characteristics of the input digital video signal, e.g. a variance thereof". In other words, it has nothing to do with a threshold derived based on a mismatch, as recited in claims 12 and 15. Even if it is based on a mismatch, a comparison with T_0 is only sufficient to terminate a search for the reference point itself, not for a "plurality of zones" as recited in step (iii) of each claim.

The value MSE(ref) is not explained (there is no detailed description of step S20 of Fig. 5), but it is apparent that the value is derived as part of the process of the blocks of the

“search area”, i.e. as part of Jung’s process corresponding to step (iv) of new claims 12 and 15. In other words, Jung’s method is based on the concept of varying the threshold *during* the searching operation. The past is always remembered in Jung, based on the LM, while in the claimed method the operation of searching based on blocks defined in a plurality of zones is terminated based on a threshold which is selected *before* the search, and based on a mismatch.

The Examiner apparently has appreciated this distinction, since Jung was not applied as a reference against claim 15 under 35 USC 102(b). Since claim 12 has been amended, Jung is not a 102(b) reference against claim 12 either.

With respect to the rejection under 35 USC 103, the statements of rejection are respectfully traversed. First, the rejection relies upon an extracted teaching from Moriyoshi (US 6,549,576) without explaining why a skilled reader would combine Jung and Moriyoshi. Applicants submit that this combination is most unlikely, since there is no motivation for a reader of Jung to seek to vary the scheme of Jung in which thresholds are varied during a search within a search area. This is particularly so since the cited passage of Moriyoshi is in the “Background of the Invention” section of the document – it is not central to Moriyoshi. Second, and even more importantly, the threshold applied in Moriyoshi is used in a completely different way from that of Jung, and for a different purpose. In Moriyoshi the threshold is used to abort the calculation of mismatch for *a given block*. In other words, during the calculation of mismatch for a given block, the threshold is used to predict that the mismatch *for that block* will be above a certain level, and so it is determined that there is no point in continuing the mismatch calculation *for that*

block (see col. 3, lines 5-7). This has no relevance at all to the situation of Jung (and the present invention), in which there is a determination of whether to terminate a search in a given search area. In fact, Moriyoshi specifically teaches against this at col. 4, lines 55-57, where it says that the operation is performed for “the whole blocks [i.e. all the blocks] within the search range”. See also col. 9, lines 21-22, for example.

Finally, and most importantly, Applicant cannot find any support for the assertion that Moriyoshi discloses the feature “threshold value determination based on a previously derived minimum mismatch value for at least one further block of the image and deriving at least one threshold value based on a mismatch value of a second block of the image adjacent the first block”, as alleged in the Office Action. In the passage describing the setting of the threshold (col 3, lines 22-32), the threshold is clearly continually being reset, and this is *during* the searching based on the search area (i.e. at a time corresponding to step (iv) of claims 12 and 15). In other words, as in Jung, thresholds are set during what, in the present invention, corresponds to step (iv) of the method, and not “before” it.

The feature of varying the threshold during the scanning of a search area (i.e. what is taught in Jung and Moriyoshi) teaches against the present invention as defined in both claims 12 and 15, and therefore both these claims are patentably distinct over the citations. All other claims depend upon one of these two claims, and therefore are patentable for the same reason.

The material of new claim 39 finds support at many points of the application. The wording is based on line 5 of claim 11. New claim 40 is based on wording from former claim 14.

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A new Figure 9 is added, according to the examiner's suggestion of paragraph 2 of the Action. It corresponds to the amended claims, and new text is included to explain the figure. The wording of the figure, and of the corresponding new text, is taken from the claims, and thus no new matter has been added.

Reconsideration and withdrawal of the rejections are respectfully requested.

Respectfully submitted,

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